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10/523,348	09/29/2005	Etsuko Koyanagi	44471/311941	8308

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EXAMINER
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COONEY, ADAM A

ART UNIT	PAPER NUMBER
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2443

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,348	<b>Applicant(s)</b> KOYANAGI ET AL.	
	<b>Examiner</b> ADAM COONEY	<b>Art Unit</b> 2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-4, 10-21, 26-28, 32, 33, 48, 49, 73, 74, 76-78 and 81-86 is/are pending in the application.
- 4a) Of the above claim(s) 26-28, 32, 33, 48, 49, 73, 74 and 81-86 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4, 10-21 and 76-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This action is responsive to the amendment filed on 9/15/2010. Claims 2-4, 10-21 and 76-78 are pending.

### ***Response to Arguments***

Applicant's arguments, see pages 18-20, with the respect to the rejection of claims 2 and 10 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Elek and Isoyama. The applicant states that Elek does not teach "according to a communication quality level of the preceding trial-class packets whether or not it is possible to send packets of the trial class". In particular, the applicant states that Elek does not use any information about the preceding probe packets to determine when to restart sending probes. However, the examiner submits that Isoyama does teach said limitation. According to Isoyama, in a controlling method of priority class setup of a communication packet and system, a sender transmits performance monitoring packets to a receiver prior to transmitting communication packets in order to monitor a communication quality (see Isoyama Abstract and paragraph 0027). The performance monitoring packet is checked for a monitoring communication quality regarding the packet and is confirmed whether the communication quality satisfies the quality requested by the communication application. If the communication quality of the priority class does not satisfy the requested quality, the monitoring of the communication quality is iterated

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by transmitting additional performance monitoring packets. The monitoring of the communication quality is iterated until the communication quality satisfies the requested communication quality (see Isoyama paragraphs 0029-0031; therefore communication quality based on the "preceding" performance packets by iteration). Therefore, the combination of Elek and Isoyama teaches all the limitations of claims 2 and 10, as shown in the rejection below.

Applicant's arguments, see pages 20-21, with respect to the rejection of claims 3 and 14 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Elek and Isoyama. The applicant states that Elek does not use information about the preceding probes to determine when to start sending probes again. The examiner submits that Isoyama teaches said limitation for the same reasons discussed above. Therefore, the combination of Elek and Isoyama teaches all the limitations of claims 3 and 14, as shown below.

Applicant's arguments, see page 21, with respect to the rejection of claims 4 and 18 under 35 U.S.C 102(b) have been fully considered but are not persuasive. The applicant states that Elek does not teach the trial class packets are stopped immediately if the communication quality of the packets are insufficient and are continuously stopped for a second predetermined period of time. In particular, the applicant states that Elek does not describe stopping the probes prior to the expiration of the sender selected time period. The examiner disagrees with this assertion and notes that the claim language merely states " if it becomes insufficient, immediately stopping to send packets of the trial class and continuously stopping to send packets of the trial

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class for a second predetermined period". The claim language does not specify that the "stopping to send packets of the trial class" is prior to an expiration of a time period. The examiner using the broadest most reasonable interpretation, construes the limitation to simply mean that when the communication quality is insufficient stop sending the trial class packets for a period of time. Elek teaches that when the loss rate of the probe experience is not sufficient the sender stops for a random time before issuing a new probe (see Elek section II(B) third paragraph). Therefore, Elek does in fact teach all the limitations of claims 4 and 18 and as such, the rejection is maintained.

Applicant's arguments, see page 21, with respect to the rejection of claims 11, 12, 15, 16, under 35 U.S.C 102(b) have been fully considered but are moot in view of the new grounds of rejection.

Applicant's arguments, see page 21, with respect to the rejection of claims 19 and 20 under 35 U.S.C. 102(b) have been fully considered but are not persuasive. Claims 19 and 20 depend upon rejected claim 18, and for at least the same rationale used to reject claim 18, claims 19 and 20 are also rejected.

Applicant's arguments, see page 21, with respect to the rejection of claims 21 and 78 under 35 U.S.C. 103(a) have been fully considered but are not persuasive. Claims 21 and 78 depend upon rejected claims 4 and 18, and for at least the same rationale used to reject claims 4 and 18, claims 21 and 78 are also rejected.

Applicant's arguments, see page 21, with respect to the rejection of claims 13, 17, 76 and 77 under 35 U.S.C. 103(a) have been fully considered but are moot in view of the new grounds of rejection.

***Claim Rejections - 35 USC § 112***

Claims 10, 14 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Regarding claims 10, 14 and 18**, Claim elements, "means for sending," "means for stopping", "means for estimating", "means for again sending", "means for starting to send", are means (or step) plus function limitations that invoke 35 U.S.C. 112, sixth paragraph. However, the written description fails to clearly link or associate the disclosed structure, material, or acts to the claimed function such that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function.

Applicant is required to:

(a) Amend the claim so that the claim limitation will no longer be a means (or step) plus function limitation under 35 U.S.C. 112, sixth paragraph; or

(b) Amend the written description of the specification such that it clearly links or associates the corresponding structure, material, or acts to the claimed function without introducing any new matter (35 U.S.C. 132(a)); or

(c) State on the record where the corresponding structure, material, or acts are set forth in the written description of the specification that perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP 2181 and 608.01(o).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 4 and 18-20 are rejected under 35 U.S.C. 102 (b) as being anticipated by**

**Elek et al. (Admission Control Based on End-to-End Measurements).**

**Regarding claims 4 and 18,** Elek teaches a method and means for starting to send packets of a trial class from a caller terminal apparatus (*see Abstract lines 8-10, section II(B) second paragraph line 1 and section II(C) second paragraph line 1; host sends probe for a time period*); estimating from time to time whether or not the communication quality of the packets is sufficient; if it is sufficient and if the sufficient state continues for a predetermined period, sending packets of a priority class (*see Abstract lines 10-11, section I fourth paragraph lines 4-7 and section II(C) fourth paragraph lines 2-3; if probe loss probability is below a threshold actual data is sent*); if it becomes insufficient, immediately stopping to send packets of the trial class and continuously stopping to send packets of the trial class for a second predetermined period (*see section II(B) third paragraph; loss rate of probe experience not sufficient therefore sender stops for a random time before issuing a new probe*); after the second predetermined period, estimating whether or not it is possible to send packets of the trial class; and if it is possible, again sending packets of the trial class from the caller terminal apparatus (*see section II(B) second paragraph and third paragraph; probes are used to measure the capacity available, and are only forwarded if capacity is available and based on the loss rate, therefore after waiting the "random time" the probes are reissued based on capacity available and loss rate, meaning communication quality*).

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**Regarding claim 19**, Elek teaches all the limitations of claim 18, as discussed above.

Further, Elek teaches wherein each of the terminal apparatuses has each of the means (see section I first paragraph lines 9-14; discloses telephony call therefore it is inherent that terminal apparatuses would be used).

**Regarding claim 20**, Elek teaches all the limitations of claim 18, as discussed above.

Further, Elek teaches wherein each of the packet transfer apparatuses has each of the means (see section II (B) second paragraph; routers).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2, 3, 10-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elek in view of Isoyama (U.S. 2002/0044557 A1).**

**Regarding claims 2 and 10**, Elek teaches a method and means for sending packets of a trial class for a predetermined period from a caller terminal apparatus (*see Abstract lines 8-10, section II(B) second paragraph line 1 and section II(C) second paragraph line 1; host sends probe for a time period*); estimating whether or not the communication quality of the packets is sufficient; if it is sufficient, sending packets of a priority class thereafter (*see Abstract lines 10-11, section I fourth paragraph lines 4-7 and section II(C) fourth paragraph lines 2-3; if probe loss probability is below a threshold actual data is sent*); if it is insufficient, stopping to send



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packets of the trial class for a second predetermined period (*see section II(B) third paragraph; loss rate of probe experience not sufficient therefore sender stops for a random time before issuing a new probe*); after the second predetermined period, estimating according to a communication quality level of the trial-class packets whether or not it is possible to send packets of the trial class; and if it is possible, again sending packets of the trial class for the predetermined period from the caller terminal apparatus (*see section II(B) second paragraph and third paragraph; probes are used to measure the capacity available, and are only forwarded if capacity is available and based on the loss rate, therefore after waiting the "random time" the probes are reissued based on capacity available and loss rate, meaning communication quality*). Elek does not teach estimating according to a communication quality level of the preceding trial-class packets.

However, Isoyama does teach such a limitation. According to Isoyama, in a controlling method of priority class setup of a communication packet and system, a sender transmits performance monitoring packets to a receiver prior to transmitting communication packets order to monitor a communication quality (*see Isoyama Abstract and paragraph 0027*). The performance monitoring packet is checked for a monitoring communication quality regarding the packet and is confirmed whether the communication quality satisfies the quality requested by the communication application. If the communication quality of the priority class does not satisfy the requested quality, the monitoring of the communication quality is iterated by transmitting additional performance monitoring packets. The monitoring of the communication quality is iterated until the communication quality satisfies the requested communication

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quality (*see Isoyama paragraphs 0029-0031; therefore communication quality based on the "preceding" performance packets by iteration*).

Therefore, it would have obvious to a person of ordinary skill in the art to have combined Elek's method of teaching a measurement based call admission control with Isoyama's method of monitoring communication quality, because Elek teaches a host probes the network to see if there is capacity available for a new session (*see Elek section II(B)*), and Isoyama's method would allow for providing classified communication quality in the case where communicative applications requesting the same communication quality may require different classes depending on conditions such as network congestion (*see Isoyama paragraphs 0005 and 0006*).

**Regarding claims 3 and 14**, Elek teaches a method and a means for sending packets of a trial class for a predetermined period from a caller terminal apparatus (*see Abstract lines 8-10, section II(B) second paragraph line 1 and section II(C) second paragraph line 1; host sends probe for a time period*); estimating whether or not the communication quality of the packets is sufficient; if it is sufficient, sending packets of a priority class thereafter (*see Abstract lines 10-11, section I fourth paragraph lines 4-7 and section II(C) fourth paragraph lines 2-3; if probe loss probability is below a threshold actual data is sent*); if it is insufficient, stopping to send packets of the trial class for a second predetermined period (*see section II(B) third paragraph; loss rate of probe experience not sufficient therefore sender stops for a random time before issuing a new probe*); after the second predetermined period, estimating whether or not it is possible to send packets of the trial class according to an execution probability ( $\text{max}/\text{total}$ , where "total" represents the number of packet transfer apparatuses trying to send packets of the trial class within a certain time unit, and "max" represents the maximum number of packet

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transfer apparatuses trying to send packets of the trial class within the certain time unit and allowed to successfully transfer the packets of the trial class without deteriorating a communication quality) estimated from a communication quality of the trial-class packets; and if it is possible, again sending packets of the trial class for the predetermined period from the caller terminal apparatus (*see section II(B) second paragraph and third paragraph and section III(A); probes are used to measure the capacity available, and are only forwarded if capacity is available and based on the loss rate, therefore after waiting the "random time" the probes are reissued based on capacity available and loss rate, meaning communication quality, probe loss determined by probabilities such as equations  $P_{cls}$ ,  $P_{pr}$  and  $P_{ex}$* ). Elek does not teach estimated from a communication quality of the preceding trial-class packets.

However, Isoyama does teach such a limitation. According to Isoyama, in a controlling method of priority class setup of a communication packet and system, a sender transmits performance monitoring packets to a receiver prior to transmitting communication packets order to monitor a communication quality (*see Isoyama Abstract and paragraph 0027*). The performance monitoring packet is checked for a monitoring communication quality regarding the packet and is confirmed whether the communication quality satisfies the quality requested by the communication application. If the communication quality of the priority class does not satisfy the requested quality, the monitoring of the communication quality is iterated by transmitting additional performance monitoring packets. The monitoring of the communication quality is iterated until the communication quality satisfies the requested communication quality (*see Isoyama paragraphs 0029-0031; therefore communication quality based on the "preceding" performance packets by iteration*).

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Therefore, it would have obvious to a person of ordinary skill in the art to have combined Elek's method of teaching a measurement based call admission control with Isoyama's method of monitoring communication quality, because Elek teaches a host probes the network to see if there is capacity available for a new session (*see Elek section II(B)*), and Isoyama's method would allow for providing classified communication quality in the case where communicative applications requesting the same communication quality may require different classes depending on conditions such as network congestion (*see Isoyama paragraphs 0005 and 0006*).

**Regarding claim 11**, Elek and Isoyama disclose the invention substantially as claimed. Further, Elek teaches wherein each of the terminal apparatuses has each of the means (see section 1 first paragraph lines 9-14; discloses telephony call therefore it is inherent that terminal apparatuses would be used).

**Regarding claim 12**, Elek and Isoyama disclose the invention substantially as claimed. Further, Elek teaches wherein each of the packet transfer apparatuses has each of the means (see section II (B) second paragraph; routers).

**Regarding claim 15**, Elek and Isoyama disclose the invention substantially as claimed. Further, Elek teaches wherein each of the terminal apparatuses has each of the means (see section 1 first paragraph lines 9-14; discloses telephony call therefore it is inherent that terminal apparatuses would be used).

**Regarding claim 16**, Elek and Isoyama disclose the invention substantially as claimed. Further, Elek teaches wherein each of the packet transfer apparatuses has each of the means (see section II (B) second paragraph; routers).

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**Claims 13, 17, 21, and 76-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elek and Isoyama, and further in view of Graham et al. (U.S. 6,097,722).**

**Regarding claims 13, 17, 21, and 76-78,** Elek and Isoyama disclose the invention substantially as claimed. Further, neither Elek nor Isoyama teach wherein the caller terminal apparatus is charged by a call control apparatus for a fee from the time when starting to transfer packets of the priority class.

However, Graham does teach such a limitation. According to Graham's bandwidth management processes and systems, a centralized call admission control/usage monitor module determines what to charge the client.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to have combined Elek and Isoyama's teaching of measurement based call admission control by monitoring a communication quality with Graham's teaching of a call admission control monitor determining what to charge a client based on bandwidth measurement, in order to provide Elek and Isoyama's system a way to charge a client for real time services such as voice and video communication that include high service quality (see Elek section 1 first paragraph). Further, Isoyama teaches setting fees depending on priorities of packets and compiling amounts of communication of a user by the priority classes (see Isoyama paragraph 0007 and 0062).

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADAM COONEY whose telephone number is (571)270-5653. The examiner can normally be reached on Monday-Thursday and every other Friday from 730AM-5PM..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. C./  
Examiner, Art Unit 2443  
11/19/2010

/J Bret Dennison/  
Primary Examiner, Art Unit 2443